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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,120	10/04/2005	Jacek F. Gieras	OT-5049	4074

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Thomas Osborn
Otis Elevator Company
Intellectual Property dept
Ten Farm Springs
Farmington, CT 06032

EXAMINER

MULLINS, BURTON S

ART UNIT	PAPER NUMBER
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2834

MAIL DATE	DELIVERY MODE
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09/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/552,120

Applicant(s)

GIERAS ET AL.

Examiner

Burton S. Mullins

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 5-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date 10/05
- 4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Application/Control Number: 10/552,120

Page 2

Art Unit: 2834

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 04 October 2005 has been considered by the examiner.

Election/Restrictions

2. Claims 5-9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected Groups II & III, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 19 July 2007. No grounds were given for the traversal. The requirement is still deemed proper and is therefore made FINAL.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the so-called "family" of modular machines (claims 1-2) wherein "at least one of said machines [has] a different number of said modules than at least one other of said machines" must be shown or the features canceled from the claims. Figs.1-11 each show a single motor; Fig.12 shows two motors but each is identical with the other. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing

Application/Control Number: 10/552,120

Page 3

Art Unit: 2834

should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claims 1-4 are objected to because of the following informalities: In claims 1-2, "said torque" lacks antecedent basis. In claim 1, change "each of said machines including" to ---each of said machines includes---; "at least one of said machines having" to ---at least one of said machines has---; and "the length of said shaft being selected" to ---the length of said shaft selected---. Similar changes should be made to claim 2. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 1-2, the term "rotor/stator" modules is indefinite because it is not clear if this means the module includes both a rotor and a stator, or a rotor or a stator. Presumably the

Application/Control Number: 10/552,120

Page 4

Art Unit: 2834

former applies; however, it is not clear how the stator can be disposed on the shaft when it is described on p.3, lines 31-35, Figs.3-7 as having plates 60,61 which are not "disposed on the shaft" 21 as are the rotor portions 71, 72.

6. The scope of claims 1&2 is indefinite since it is not clear if the claims are each directed to the combination (i.e., the "family") or the subcombination (a single motor with, e.g., end plates, brake, rotor). The preamble is directed to the combination; however, each claim contains language descriptive of both the combination ("at least one of said machines [has] a different number of said modules than at least one other of said machines") and the subcombination (end plates, brake, rotor) and is therefor indefinite in scope.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richardson (US 5,365,137) in view of Rouard et al. (EP 0 557 056). Richardson teaches a modular motor comprising: a rotatable shaft 18; a plurality of identical, generally cylindrical, transverse flux rotor modules (rotor bars) 208, 216, 218 disposed on said shaft (Fig.5), lines of flux between the rotor and the stator of said modules being perpendicular to said torque (i.e., perpendicular to rotation direction, Fig.5), at least one of said modules 208, 216, 218 being contiguous with at least one other of said modules adjacent thereto (Figs.1,2&5; c.7:48-56), each said module

Art Unit: 2834

capable of contributing substantially the same rated torque to said shaft (inherent since the number of poles is the same for each rotor module), the rated torque of said motor thereby equaling the rated torque of each said module times the number of said modules (inherent); a rotatably driven member (inherent) disposed for rotation with said shaft; and a plurality of end plates 134, 136 one for each side of any of said modules which side is not contiguous with another of said modules (Fig.1); characterized by: the length of said shaft being selected to accommodate at least said number of said modules (c.7:50-59) and said driven member (inherent in order to drive the driven member). Richardson further teaches a "family" of modular, transverse flux, rotary electric machines since the modules may be combined to form motors with additional motor phases (c.3:1-2). Thus, at least one of the machines of Richardson has a different number of modules than another of the machines in the "family".

Richardson does not teach that each machine has "at least one brake formed compatibly with said modules and disposed between one of said sides not contiguous with another of said modules and the corresponding one of said end plates".

Rouard teaches a modular hoist motor comprising a stator module 3 and a rotor module 4 (with rotor 9). The rotor module 4 includes a brake (friction pad) 17 "formed compatibly with the module", i.e. integrated therein (c.2:51-56; Fig.3), and disposed between one of the sides not contiguous with another of the modules (brake pad 17 faces away from rotor 9 and stator module 3; c.2:51-52; Fig.3). Rouard's brake provides a fail-safe device to prevent the hoist's shaft from rotating (c.1:42-49 & c.2:51-56).

It would have been obvious to modify Richardson's modular motor and provide a brake per Rouard formed compatibly with said modules and disposed between one of said sides not

Application/Control Number: 10/552,120

Page 6

Art Unit: 2834

contiguous with another of said modules and the corresponding one of said end plates since the brake would have provided a fail-safe device to prevent the hoist's shaft from rotating.

Regarding claim 3, the machine of Richardson has modules disposed only on one side of the driven member since there is no teaching of them being disposed on each side thereof.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Richardson and Rouard as applied to claim 1 above, and further in view of Machida et al. JP (54-146368).

The modules in Richardson and Rouard are not disposed on each side of a driven member.

Machida teaches a hoisting machine including two motors 4A, 4B each with braking means 5A, 5B and located on each side of the driven member (hoisting drums 2A, 2B; Figs. 1, 3 & 4) so that load acting on the hook 7 is supported uniformly by the motors and braking means (abstract).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 571-272-2029.

The examiner can normally be reached on Monday-Friday, 9 am to 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 10/552,120

Page 7

Art Unit: 2834

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Burton S. Mullins
Primary Examiner
Art Unit 2834

bsm

29 August 2007